

This amendment is being submitted in regards to the Cricket Mountain Mine, operated by Graymont Western US, Inc, file number M/027/006. The latest approved revision to M/027/006 is dated January 2010.

The previous permitted acreage for disturbance was 1,702.7 acres, with the partial surety acreage of 1311.2 acres. The previous full surety bond amount was \$5,144,090, and the partial, or actual, surety was \$3,885,790. The difference between the full surety and the partial surety was \$1,258,299. The addition of the Big Sage road will increase the total surety to \$5,369,990.

The Big Sage road project covers a total of 35.9 acres; this includes growth media piles placed next to the road and the increased width area noted in the easement. In accordance with the easement on file the road will have a running width of 100 feet and a total disturbance of approximately 120 feet, with a length of approximately 11,586 feet.

The total bond increase just for the road; which includes the eight additional culverts, is \$225,900 with \$201,244 for the road and \$24,656 for the culverts. A map of the proposed road construction has been included as well as the proposed study area for wildlife. The increased cost of the culverts was calculated by increasing the number of culverts in the spreadsheet used to calculate equipment and labor costs for the road.

Construction of the Big Sage road will be performed in the manner specified on page 16 of the Notice of Intention to Amend Mining Operations: Big Sage document submitted previously to the state with further elaboration in the easement document. The road will be reclaimed as noted in the NOI on page 33, and in accordance with the Utah Administrative Code R647.

The road will be treated in the same manner as other haul roads for dust suppression, as noted in the Fugitive Dust Control plan submitted in the NOI documents. The specific treatment of the road for dust is detailed on page 8 of the Fugitive Dust Control plan. In addition a wildlife and raptor survey will be completed in the area expected to be disturbed by the road, with a buffer area included, and a study report will be provided in future documentation. The raptor study will be conducted at an extent of one half mile from the road centerline.

RECEIVED E-Mail

FEB 26 2013

Div. of Oil, Gas & Mining

APPROVED

MAR 22 2013

DIV. OIL GAS & MINING







The following are the calculations for the total Big Sage road.

CRICKET MOUNTAIN PROJECT - BIG SAGE					
Haul/Access Roads				Spreadsheet D	
Facility Name	Acres		Revised: 2/26/2013		
Haul/Access Roads	19.8		* Includes 10.7 acres from the Facility Area and 4.6 acres from the quarry areas.		
Interior Roads	15.3				
	35.9				
Total	71				
		Earthwork		Revegetation	
		Contour/Regrade	Growth Media Replacement	Seed	TOTAL
Equipment	(1)	(2) & (5)	(3)	(4)	-
Quantity	231,617 CY	57,273 CY (7)	71 AC	71 AC	-
Production Rate	716 CY/HR	624 CY/HR	1.39 AC/HR	1.4 AC/HR	-
Time Required	324 HR	92 HR	51 HR	52 HR	-
Unit Cost					
Equipment	337.56 \$/hr	1,069.41 \$/hr	182.90 \$/hr	\$64.50 \$/hr	-
Labor	85.79 \$/hr	300.26 \$/hr	42.89 \$/hr	\$13.44 \$/hr	-
Seed	0.00 \$/ac	0.00 \$/ac	0.00 \$/ac	\$79.45 \$/ac	-
Cost/Unit Area (\$/ac)	-	-	\$162.18	\$137	-
Cost/Unit Volume (\$/cy)	\$0.59	\$2.20	-	-	-
Equipment Cost	\$109,369	\$98,385	\$9,328	\$3,354	\$220,436
Labor Cost	\$27,795	\$27,624	\$2,188	\$699	\$58,306
Seed Cost	\$0	\$0	\$0	\$5,641	\$5,641
TOTAL COSTS	\$137,164	\$126,009	\$11,515	\$9,694	\$284,383
Manpower Sub-total	Equipment Sub-total		Material Costs		
Earthwork	\$57,607	Earthwork	\$217,082	Earthwork	Total Cost (\$/AC): \$4,005
Revegetation	\$699	Revegetation	\$3,354	Revegetation \$5,641	71 plan view acres
(1) D9R Dozer, 1 each; 16H Motor Grader, 1 each.					
(2) 631 Scraper, 4 each; 16H Motor Grader, 1 each; 8000 gal Water Wagon, 1 each; D9R Dozer, 1 each.					
(3) D9R Dozer, 1 each.					
(4) Broadcast Seeding					
(5) Growth media placement volume based on 6 inch depth.					

## New Culvert Cost

B) CULVERTS					
CULVERT REMOVAL	No. Culverts	\$ equipment/culvert	\$ labor/culvert	TOTAL CULVERT COST:	
(2 laborers, 1 operator, 1 CAT 325 Excavator)	12	\$767.27	\$ 1,544.19	\$ 27,737.55	
Assume 4 hours per culvert based on RS Means Heavy Construction, 2009, removal rates for 36 inch diameter culvert, 024113-40-0180.					

## Old Culvert Cost

B) CULVERTS					
CULVERT REMOVAL	No. Culverts	\$ equipment/culvert	\$ labor/culvert	TOTAL CULVERT COST:	
(2 laborers, 1 operator, 1 CAT 325 Excavator)	4	\$255.76	514.73	\$	3,081.95
Assume 4 hours per culvert based on RS Means Heavy Construction, 2009, removal rates for 36 inch diameter culvert, 024113-40-0180.					

RECEIVED E-Mail

FEB 26 2013

Div. of Oil, Gas & Mining

APPROVED

MAR 22 2013

DIV. OIL GAS & MINING



# Big Sage haul road volume calculations.

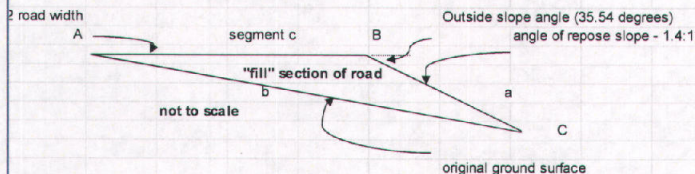
## CRICKET MOUNTAIN PROJECT - BIG SAGE Road Regrade Volumes

Spreadsheet D1

Revised: 2/26/2013

Input Parameters		Outside slope		35.54 degrees		1.4 slope					
Segment Length (feet)	Segment Width (feet)	Section Original Ground Surface Slope	Slope Angle A (degrees)	Crest Angle B (degrees)	Intersect on Angle C (degrees)	Original surface segment length (feet)	Fill Triangle Area (1) (square feet)	Segment Acres	Total Segment Width (feet) (2)	Segment Regrade Volume (cubic feet)	Segment Regrade Volume (cubic yards)
Roads:											
1,500	175	25.0%	14.04	144.46	21.50	138.76	1,472.4	9.27	269.2	2,208,534	81,798
1,000	350	0.0%	0.00	144.46	35.54	175.00	0.0	8.03	350.0	0	0
400	175	25.0%	14.04	144.46	21.50	138.76	1,472.4	2.47	269.2	588,942	21,813
Roads:											
500	200	12.5%	7.13	144.46	28.41	122.16	757.6	2.78	242.4	378,788	14,029
11,086	100	12.5%	7.13	144.46	28.41	61.08	189.4	30.85	121.2	2,099,621	77,764
Roads:											
4,400	80	20.0%	11.31	144.46	24.23	56.66	222.2	11.22	111.1	977,778	36,214
2,250	80	0.0%	0.00	144.46	35.54	40.00	0.0	4.13	80.0	0	0
								68.75			231,617

- (1) The (triangle representing the) fill portion of a road cross-section will be placed back into the cut portion of the road (not shown) to return to original contour. The determination of that area represents the sum of the earthmoving required for that segment.
- (2) Roughly approximated by the projection of segment b (the original ground surface) times two sides (the width of the cut half of the road is slightly overstated).



A = atan (original slope)  
B = 180 degrees - atan (1.4/1)  
C = 180 - A - B

states that:  $\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$  are all equivalent

Then  $b = (\sin B / \sin C) * c$

The law of sines further states that the area of the triangle =  $0.5 * cb \sin A$

RECEIVED E-Mail

FEB 26 2013

Div. of Oil, Gas & Mining

APPROVED

MAR 22 2013

DIV. OIL GAS & MINING



# New Total Surety Amount

GRAYMONT WESTERN U.S., INC. CRICKET MOUNTAIN PROJECT RECLAMATION COST SUMMARY					
SPREADSHEET/PROJECT COMPONENT	EQUIPMENT	LABOR	MATERIALS	TOTALS	PLAN VIEW ACRES
A Overburden/Fines Piles	\$558,075	\$153,277	\$26,908	\$738,259	452.0
B Yards and Stockpiles	\$305,371	\$81,150	\$15,120	\$401,641	190.3
C Quarries	\$1,276,478	\$352,973	\$65,124	\$1,694,575	993.7
D Haul/Access Roads	\$300,469	\$79,418	\$7,977	\$387,864	100.4
E Miscellaneous	\$66,511	\$82,828	\$12,880	\$162,218	2.2
F Concrete Foundation Demolition	\$10,777	\$2,071	\$0	\$12,848	NA
G Building Demolition and Disposal	\$91,584	\$70,449	\$0	\$162,033	NA
Subtotal	\$2,609,265	\$822,166	\$128,009	\$3,559,438	1738.6
General Site Clean-Up (1% of total: RS Means, 2007, 017413.200040, Site Work and Landscape Cost Data, 26th Edition)				\$35,594	
Mobilization/Demobilization				\$118,656	
Total Direct Costs				\$3,713,688	
Contractor Overhead and Profit (10%)				\$371,369	
Contingency (10%)				\$371,369	
Total with Indirect Costs				\$4,456,426	
Year 1 Escalation (3.8%)				\$169,344	
Year 2 Escalation (3.8%)				\$175,779	
Year 3 Escalation (3.8%)				\$182,459	
Year 4 Escalation (3.8%)				\$189,392	
Year 5 Escalation (3.8%)				\$196,589	
GRAND TOTAL				\$5,369,990	1,738.6
				\$/acre	\$3,088.71
Total Proposed Bond				\$5,369,990	

RECEIVED E-Mail

FEB 26 2013

Div. of Oil, Gas & Mining

APPROVED

MAR 22 2013

DIV. OIL GAS & MINING